**PRESTRESSED GIRDER DESIGN AND DETAILING CHECKLIST**

| | | | | | |
|---|---|---|---|---|---|
| Name of Project: | Input data | Originator: | Input name and initials | Date: | |
| Name of Structure: | Input data | Checker: | Input name and initials | Date: | |
| Structure Number: | Input data | | | | |
| Project Number: | Input data | | | | |
| PIN: | Input data | | | | |

| TITLE BLOCK | Provided (Originator) | | | Chk | Comments |
|---|---|---|---|---|---|
| | Yes | No | NA | | |
| Complete all information required in the standard title.<br>• Top line = project name<br>• Second line = structure name<br>• Third line = sheet name | | | | | |
| Complete the title block. | | | | | |
| Fill in initials, dates, and signatures. | | | | | |

| DESIGN | Provided (Originator) | | | Chk | Comments |
|---|---|---|---|---|---|
| | Yes | No | NA | | |
| Meet the requirements of AASHTO LRFD and the UDOT Structures Design and Detailing Manual(SDDM) and as shown on the Prestressed Concrete Girder Information sheet, DD-8. | | | | | |
| UDOT Structures Design Manager approval is required to exceed any of the limits listed in this document. | | | | | |
| Use a girder release strength, f'ci, less than or equal to 8.5 ksi. Limit f'ci to less than or equal to 7.5 ksi for typical projects. | | | | | |
| Use a girder strength, f'c, less than or equal to 10.0 ksi. Limit f'c to less than or equal to 8.5 ksi for typical projects. | | | | | |
| Limit the maximum skew to 45 degrees. | | | | | . |
| Limit the minimum overhang to one-half of the top flange width plus 1'-0" | | | | | |
| Limit the maximum overhang to one-half the girder spacing. | | | | | |
| Limit the maximum number of draped strands to 18. | | | | | |
| Do not transform section properties in girder analysis. | | | | | |
| Design continuous girders according to AASHTO LRFD Article 5.14.1.4 "Bridges Composed of Simple Span Precast Girders Made Continuous". | | | | | |
| Design all prestressed bulb tee girder bridges for composite action. | | | | | |
| Check the girder stresses per AASHTO. Use moderate corrosion conditions for the bottom flange of prestressed girders unless the project design criteria states otherwise. | | | | | |
| Include girder camber, vertical curve, horizontal curve and superelevation in the haunch calculation. | | | | | |
| Design deck reinforcement for negative moments in multi-span bridges made continuous for live load. | | | | | |
| Limit the use of deck bulb-tee girders to roadways with an Average Daily Traffic (ADT) of 30,000 or less. Use an HMA overlay with a waterproofing membrane when using deck bulb-tee girders. | | | | | |
| Use the same type and number of prestressed girders in each continuous superstructure. Obtain approval from the UDOT Structures Design Manager to change girder type or number of girders at bent expansion joints. | | | | | |
| Assume that the bottom of the deck is directly on the top of the girder for purposes of calculating composite section properties. | | | | | |
| Debonded strands are allowed. | | | | | |

| SHEET | Provided (Originator) | | | Chk | Comments |
|---|---|---|---|---|---|
| | Yes | No | NA | | |
| Use the Working Standard. The blue boxes indicate areas requiring designer review and updates. Numbers in blue boxes reference the sheet direction notes listed below. | | | | | |
| Sheet direction notes.<br>1. Complete the table. Add additional table rows if required. $C_F$ is for information. Do not use $C_F$ to set screed elevations.<br>2. Set the length of the G5 bar based on the haunch dimension and set the dimension from top of girder to the top of the G5 bar.<br>3. Show the actual strand pattern at end of the girder and at midspan of the girder.<br>4. Delete note 8 if extended strands are not required. Verify typical notes are sufficient and accurate for the current project.<br>5. Set the required spacing of shear reinforcing away from the end of the girder.<br>6. Do not modify end reinforcing without approval from UDOT. The end reinforcing is set for the maximum number of 0.6" diameter strands listed below. Update the end reinforcing if the strand limit is exceeded.<br>a. UBT42 or UDBT42, strand limit is 42 - 0.6" diameter strands<br>b. UBT50 or UDBT50, strand limit is 48 - 0.6" diameter strands<br>c. UBT58 or UDBT58, strand limit is 56 - 0.6" diameter strands<br>d. UBT66 or UDBT66, strand limit is 56 - 0.6" diameter strands<br>e. UBT74 or UDBT74, strand limit is 56 - 0.6" diameter strands<br>f. UBT82 or UDBT82, strand limit is 64 - 0.6" diameter strands<br>g. UBT90 or UDBT90, strand limit is 64 - 0.6" diameter strands<br>h. UBT98 or UDBT98, strand limit is 64 - 0.6" diameter strands<br>7. Determine the length and number of G6 bars or delete bar G6 if not required.<br>8. List the length of debonding for strands or delete callout if debonding is not used. | | | | | |
| Remove all sheet direction notes and boxes. | | | | | |